

*Appln no. 10/668,799
Amendment dated Oct. 21, 2005
Response to final Office Action of June 21, 2005*

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (currently amended) An abrasive array of a plurality of protruding units, each unit having a body composed of at least abrasive grains and a binder, each body having a base and a substantially linear region most distal from the base, the abrasive array comprising:
an at least two-by-two array of protruding units,
wherein each protruding unit has a base defined by a perimeter that has a first side, and an oppositely disposed second side, and a third side extending between the first side and the second side,
wherein, for each unit, its respective distal linear region, when projected on to a plane that is coplanar with its respective base, extends between a non-central point on the first side of the base and a non-central point on the second side of the base and, ~~is not positioned at the perimeter~~ co-linear to the third side.
2. (original) The abrasive array of claim 1, wherein each base is a rectangle having length and a width.
3. (original) The abrasive array of claim 2, wherein the length of the rectangle is between 1 and 150 mils and the width of the rectangle is between 1 and 150 mils.
4. (original) The abrasive array of claim 2, wherein the distance between each base and its respective distal linear region is at most 60 mils.
5. (original) The abrasive array of claim 2, wherein the distal linear regions are substantially parallel with at least one side of their corresponding rectangular bases.
6. (original) The abrasive array of claim 2, wherein the distal linear regions are not parallel with at least one side of their corresponding rectangular bases.

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7. (original) The abrasive array of claim 1, wherein each base has substantially the same geometry.
8. (original) The abrasive array of claim 1, wherein each base has a different geometry.
9. (original) The abrasive array of claim 1, wherein each base is the same size.
10. (original) The abrasive array of claim 1, wherein at least one base is a different size than another base.
11. (original) The abrasive array of claim 1, wherein the distal linear regions are substantially parallel with one another.
12. (original) The abrasive array of claim 1, wherein at least one distal linear region is not parallel with another distal linear region.
13. (original) The abrasive array of claim 1, wherein each the distance between each base and its respective distal linear region is substantially constant.
14. (original) The abrasive array of claim 1, wherein the distance between each base and its respective distal linear region varies.
15. (original) The abrasive array of claim 1, wherein each of the bases are substantially coplanar.
16. (original) The abrasive array of claim 1, wherein the body of each protruding unit is formed at least in part from the group consisting of aluminum oxide, silicon carbide, alumina zirconia, garnet, diamond, cubic boron nitride, oxide cerium, and mixtures thereof.

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17. (currently amended) An abrasive article comprising:
a backing having a front and back surface; and
an abrasive coating comprising abrasive grains bonded to the front surface of the backing,
wherein the abrasive coating includes an at least two-by-two array of protruding
units,
wherein each protruding unit has a base defined by a perimeter that has a first
side, and an oppositely disposed second side, and a third side extending between the first
side and the second side,
wherein, for each unit, its respective distal linear region, when projected on to a
plane that is coplanar with its respective base, extends between a non-central point on the
first side of the base and a non-central point on the second side of the base, and is not
positioned at co-linear to the perimeter third side.
18. (original) The abrasive article of claim 17, wherein each base is a rectangle having
length and a width.
19. (original) The abrasive article of claim 18, wherein the length of the rectangle is
between 1 and 150 mils and the width of the rectangle is between 1 and 150 mils.
20. (original) The abrasive article of claim 18, wherein the distance between each base
and its respective distal linear region is at most 60 mils.
21. (original) The abrasive article of claim 18, wherein the distal linear regions are
substantially parallel with at least one side of their corresponding rectangular bases.
22. (original) The abrasive article of claim 18, wherein the distal linear regions are not
parallel with at least one side of their corresponding rectangular bases.
23. (original) The abrasive article of claim 17, wherein each base has substantially the
same geometry.

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24. (original) The abrasive article of claim 17, wherein each base has a different geometry.
25. (original) The abrasive article of claim 17, wherein each base is the same size.
26. (original) The abrasive article of claim 17, wherein at least one base is a different size than another base.
27. (original) The abrasive article of claim 17, wherein the distal linear regions are substantially parallel with one another.
28. (original) The abrasive article of claim 17, wherein at least one distal linear region is not parallel with another distal linear region.
29. (original) The abrasive article of claim 17, wherein each the distance between each base and its respective distal linear region is substantially constant.
30. (original) The abrasive article of claim 17, wherein the distance between each base and its respective distal linear region varies.
31. (original) The abrasive article of claim 17, wherein the body of each protruding unit is formed at least in part from the group consisting of aluminum oxide, silicon carbide, alumina zirconia, garnet, diamond, cubic boron nitride, oxide cerium, and mixtures thereof.